

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: PLEASANT LAKE	Lake Area (ha):	245.20
Town: NEW LONDON	Maximum depth (m):	28.6
County: Merrimack	Mean depth (m):	10.5
River Basin: Merrimack	Volume (m ³):	25761000
Latitude: 43°25'29" N	Relative depth:	1.6
Longitude: 71°57'03" W	Shore configuration:	1.30
Elevation (ft): 805	Areal water load (m/yr):	6.93
Shore length (m): 7200	Flushing rate (yr ⁻¹):	0.70
Watershed area (ha): 3030.3	P retention coeff.:	0.60
% watershed ponded: 0.0	Lake type:	natural w/dam

BIOLOGICAL:

1 February 1994

9 July 1993

DOM. PHYTOPLANKTON (% TOTAL)	#1	SYNURA 80%	ASTERIONELLA 40%
	#2	RHIZOLENIA 10%	DINOBRYON 30%
	#3	ASTERIONELLA 10%	RHIZOLENIA 20%
PHYTOPLANKTON ABUNDANCE (cells/mL)			295
CHLOROPHYLL-A (µg/L)			1.28
DOM. ZOOPLANKTON (% TOTAL)	#1	GASTROPUS 75%	GREEN CILIATE SPP 96%
	#2		
	#3		
ROTIFERS/LITER		209	33
MICROCRUSTACEA/LITER		35	33
ZOOPLANKTON ABUNDANCE (#/L)		244	396
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			8.7
BOTTOM DISSOLVED OXYGEN (mg/L)		11.7	8.4
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 5.0
Hypolimnion volume (m³) : 6435000
Anoxic volume (m³) : None

CHEMICAL:

Lake: PLEASANT LAKE

Town: NEW LONDON

	1 February 1994		9 July 1993		
DEPTH (m)	6.0	12.0	2.0	8.0	15.0
pH (units)	6.7	6.6	6.8	6.9	6.2
A.N.C. (Alkalinity)	3.8	3.7	4.1	4.2	3.8
NITRATE NITROGEN	0.05	< 0.05	< 0.04		< 0.04
TOTAL KJELDAHL NITROGEN	0.16	0.18	0.26	0.14	0.27
TOTAL PHOSPHORUS	0.006	0.008	0.003	0.004	0.005
CONDUCTIVITY (μ mhos/cm)	42.0	42.9	41.3	40.4	41.2
APPARENT COLOR (cpu)	6	8	< 5	8	11
MAGNESIUM			0.50		
CALCIUM			2.6		
SODIUM			3.6		
POTASSIUM			0.48		
CHLORIDE	6	6	< 6		< 6
SULFATE	6	6	5		5
TN : TP	35	23	87		54
CALCITE SATURATION INDEX			3.5		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1993

D.O. S.D. PLANT CHL TOTAL CLASS

0	0	0	0	0	Oligo.
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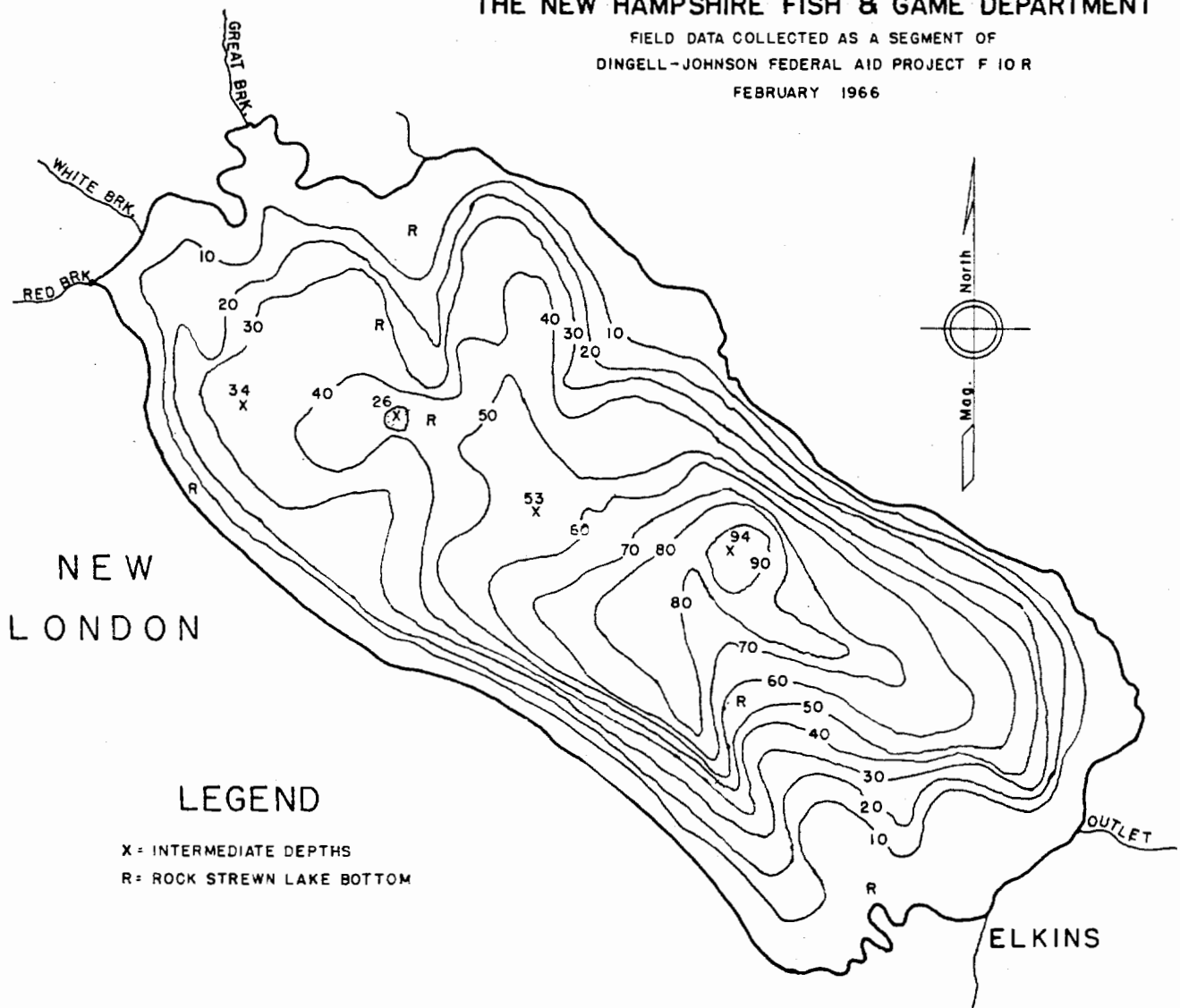
COMMENTS:

1. This lake was previously surveyed and classified in 1979. There was no change in classification or in water quality between the two years. The lake received zero trophic points in both years.
2. This is the quintessential oligotrophic lake: large, deep, crystal-clear lake with rocky/sandy shoreline and very little plant growth. The water clarity in this lake is due to low nutrient levels and not to acid conditions, which is the case in many New Hampshire lakes.
3. A paved boat ramp was present next to the dam, between the dam and Elkins town beach.
4. Chroomonas (30%), Merismopedia (15%) and tiny green flagellates (15%) were the dominant genera of wholewater phytoplankton.

PLEASANT LAKE DEPTH CONTOUR CHART

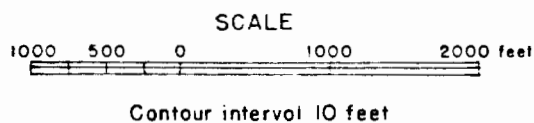
PREPARED AND PUBLISHED BY
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FIELD DATA COLLECTED AS A SEGMENT OF
DINGELL-JOHNSON FEDERAL AID PROJECT F 10 R
FEBRUARY 1966



LEGEND

X - INTERMEDIATE DEPTHS
R - ROCK STREWN LAKE BOTTOM



NOTE:-

THIS CHART IS NOT INTENDED AS
A NAVIGATION MAP.

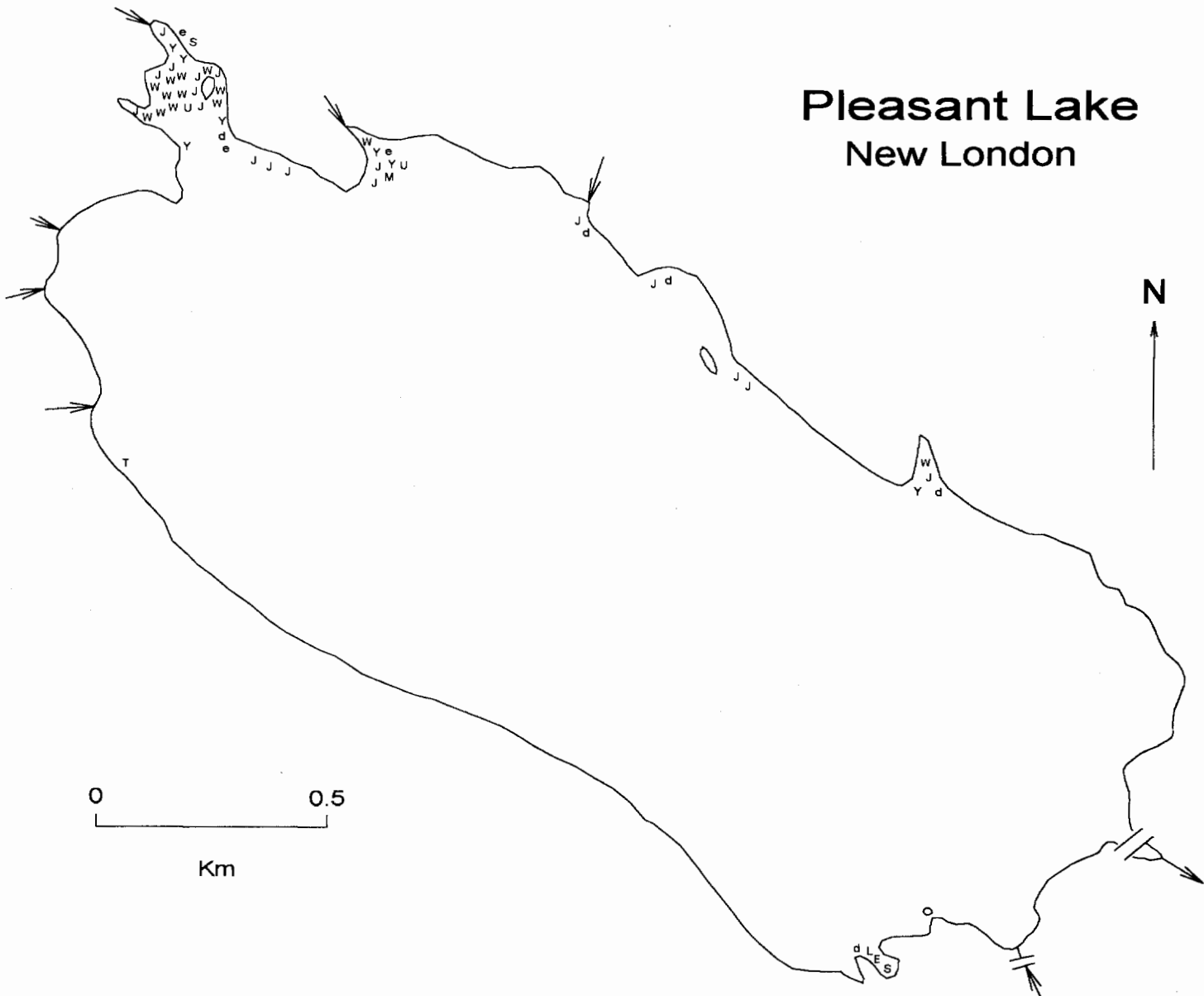
ALL SOUNDINGS COMPUTED AT NORMAL FULL
POOL BY AN ELECTRONIC RECORDING
SOUNDER.

CONTOUR LINES ARE APPROXIMATE AND
SOUNDINGS ARE ACCURATE ONLY WITHIN
THE LIMITS OF THE FIELD METHODS
USED.

[illegible]

111-205

Pleasant Lake
New London



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